



ÅRSRAPPORTER FRA FORSKNINGSGRUPPENE 2018

Klinikk for kirurgi, inflammasjonsmedisin
og transplantasjon (KIT)

Innholdsfortegnelse

- Forord – hilsen fra forskningsleder
- Handlingsplan for forskning i KIT for 2018

Årsrapporter fra forskningsgruppene for 2018

Avdeling for gastro- og barnekirurgi (AGK)

- Barnekirurgi
- Kolorektal kirurgi
- Pancreaskreft
- Svulster i lever og galleveier
- Øsafagus- og ventrikkelsykdommer

Avdeling for revmatologi, hud og infeksjonssykdommer (RHI)

- Hud
- Klinisk mikrobiologi og mikrobiota medisin
- Olafiaklinikken
- Revmatologi

Avdeling for transplantasjonsmedisin (ATX)

- Eksperimentell leverforskning
- Eksperimentell Transplantasjon for Kreft
- Klinisk transplantasjonskirurgi og eksperimentell immunologi
- Klinisk PSC forskningsgruppe (NoPSC)
- Nyretransplantasjonsmedisin
- Klinisk effektforskning
- Livskvalitet og helseøkonomi

Avdeling for urologi (URO)

- Infeksjon og inflammasjon i urologi
- Prostatakreft

Institutt for indremedisinsk forskning (IMF)

- Atherosklerose og relaterte metabolske sykdommer
- Genomikk og metagenomikk ved inflammasjonssykdom
- Inflammasjon og hjertesvikt
- Inflammasjonsmarkører for hjertekar- og metabolske sykdommer
- Eksperimentell leverforskning (NoPSC)
- Inflammasjonssykdommers genomikk og metagenomikk (NoPSC)

Forord

Forskningsåret 2018 var for KIT et godt år. Antallet artikler kryper forsiktig oppover og en stabilt høy andel publiseres i de mest prestisjefylte tidsskriftene (nivå 2 tidsskrifter). Det har kommet flere viktige tildelinger av forskningsmidler, flere av forskerne våre har fått forskningspriser og rapportene fra forskningsgruppelederne gir inntrykk av et sunt forskningsmiljø med engasjerte lederfigurer som tar oppgaven sin som forskningsgruppeledere seriøst.

Forskningsutvalget i KIT arbeider systematisk med utgangspunkt i årwise handlingsplaner som baserer seg på sykehusets sentrale forskningsstrategi. Handlingsplan for forskning 2018 (se side 2) hadde som sentrale momenter å få på plass økt bevissthet rundt beskyttet forskningstid for forskningsaktive klinikere, særlig yngre forskere under oppbygging. Arbeidet dannet grunnlag for et videre arbeid i regi av OUS Kreftsenter (CCC) om tilsvarende problemstillinger og har blant annet gitt tydelige rammer for bruk av de gamle D-stillingene (fordypningstid). Tildelinger av midler til forskningsutstyr har blitt godt integrert i budsjettprosessene, og generelt har bevisstheten omkring den dedikerte forskningspotten i budsjettprosessene gitt økt oppmerksomhet på forskningsaspekter i klinikkens budsjetter. Positivt kan også nevnes den nå stabile samarbeidsflaten for helsefagforskning med OsloMET gjennom de årwise forskningsseminarene og tilhørende forskningsaktiviteter.

FU har hatt et gjennomgående fokus på økt tildelingsprosent for eksterne forskningsmidler. «Søknadspoliklinikken» er nå veletablert som et lavterskeltilbud for forskere som skal søke om forskningsmidler hos Helse Sør-Øst og Forskningsrådet. Det har vært en stabil tilstrømming til tilbudet og tilbakemeldingene er gode (for mer informasjon, se: <https://www.uio.no/for-ansatte/enhetssider/med/klinmed/aktuelt/aktuelle-saker/2018/arrangerer-soknadspoliklinikk-om-forskningsmidler.html>). I hvilken grad slike tiltak og en generelt øket bevissthet omkring kvalitet på forskningssøknader skal ha æren for de mange tildelingene av forskningsmidler er vel høyst usikkert. Gledelig er det uansett at klinikken gjennom året har hatt en sjelden god uttelling på sine søknader om forskningsmidler, både i Kreftforeningen, Helse-Sør Øst og Forskningsrådet. Tildelingene er viktige tilskudd i seg selv, og tjener også som inspirasjon for andre om at det nytter å søke.

I 2018 var fortsatt fokus for bruk av stimuleringsmidlene biobank og registervirksomhet. Området er i et nærmest uuttømmelig ressursunderskudd hva gjelder institusjonelle midler. Organiseringen av biobanker i KIT går langsomt mot større enheter (eks. etableringen av transplantasjonsbiobank og biobank for inflammasjonssykdommer), og oppslutningen omkring kreftbiobanken er økende. Fortsatt mangler en tydelig institusjonell strategi for samling av fragmentert biobankaktivitet, der særlig grenseflaten mot diagnostiske biobanker (eks. klinisk kjemisk, patologi) og personalressurser er mangelvare. Mens arbeidet opp mot disse ulike utviklingstrekkene og udekkede behovene fortsetter, har FU for 2019 utarbeidet

planer for internasjonalisering som hovedsatsningsområde med tilhørende budsjettering av tildelte stimuleringsmidler for forskning opp mot dette.

Handlingsplan for forskning i KIT for 2018

Biobank i KIT (løpende prosjekt)	Arbeidsgruppeledere FU (ref. OUS strategi)
- Videreføre stimulering av bredere biobanker gjennom utlysning av stimuleringsmidler for samarbeid. Stimulere til oppslutning om kreftbiobanken. - Utarbeide modell for strategisk lokaliserte, brede og samlende «biobankstasjoner» og diskutere infrastruktur/arealimplikasjoner - Utarbeide prosedyrebok («Biobank ABC») for KIT - Støtte arbeid med digitalisering av samtykkeordninger (for alle biobanker) - Utrede behov for personellressurser og diskutere modeller for samarbeid omkring eksisterende ressurser på tvers av fagmiljøer	Tom Hemming Karlsen Viktor Berge Anders Aasberg Arild Nesbakken Ref. 1f, 5a, 5b
Tidsavgrensede arbeidsgruppeprosjekter 2018:	
- Utarbeide forslag til et definert pasientforløp innen persontilpasset medisin i KIT innen pillarene kreft, inflammasjon og TX, inkl. behovs- og kompetanse-kartlegging og samarbeidsmodell internt og med tilgrensende klinikker - Arbeidsgruppestørrelse: 3-6 personer per fagområde - Forfall sluttleveranse: 31. oktober 2018	Øyvind Molberg Anders Aasberg Tom Hemming Karlsen Ref. 1d, 2f
- Implementere diskusjon om løsninger for forskningstid og forsknings-engasjement for ansatte i full klinisk stilling på ledersamlinger N3-N5 - Arbeidsgruppestørrelse: 2-3 personer (inkl. stabsrepresentant). - Forfall sluttleveranse: 1. august 2018	Einar Martin Aandahl Ref. 2b
- Utarbeide og iverksette spesifikke støttetiltak for ivaretagelse av karriereutvikling hos ynge forskere og kvinnelige forskere - Arbeidsgruppestørrelse: 3-4 personer (ynge forskere, høy kvinneandel) - Forfall sluttleveranse: 1. september 2018	Kristin Bjørnland Ref. 3b
- Utarbeide rutine for implementering av forskning i ordinære budsjettprosesser på avdelings- og klinikknivå, både for MTU og stillinger - Arbeidsgruppe: 2-3 personer inkl. en representant for økonomi stab KIT - Forfall sluttleveranse: 1. mai 2018	Steinar Heldal Ref. 1e
- Utarbeide strategi for translasjonsforskning i KIT og utrede mulighet for seksjonsstruktur ved IIF - Arbeidsgruppe: 3-5 personer, inkl. UiO representant - Forfall sluttleveranse: 1. desember 2018	Bente Halvorsen/Arne Yndestad Ref. 2d, 2f
- Videreutvikle helsefagforskning og samarbeidet med HiOA med fokus på PROM og kombinerte stillinger - Arbeidsgruppe: 3-4 inkl. HiOA representant - Forfall sluttleveranse: 1. november 2018	Marit Helen Andersen Ref. 2g, 3d
- Videreutvikle forskningsgruppene i klinikken gjennom etablering av standardiserte kurs for forskningsgruppeledere med innføring i PVO, REK, SLV, budsjett-prosesser UiO/OUS osv. - Arbeidsgruppe: 3-4 personer inkl. representant fra forskningsstøtte - Forfall sluttleveranse: 31. september 2018	Øyvind Molberg Ref. 3b
- Utrede brukerbehov knyttet til etablering og drift av forskningsregistre i KIT - Arbeidsgruppe: 3-5 personer - Forfall sluttleveranse 1. april 2018	Anders Aasberg Ref. 5a, 5e
KITs samarbeidsseminar-serie; møter i 2018	
- Partner januar/februar/mars: Bidrag til kreftsenter FU fellesmøte - Partner april/mai: Patologisk avdeling (biobankorientert) - Partner september/oktober: Fagseminar omkring primære levertumores - Partner november/desember: Radiologisk avdeling?	Tom Hemming Karlsen og Morten T. Eriksen pluss eksterne ressurspersoner utpekt for hvert av seminarene

Årsrapport forskning 2018 /Annual Research Report 2018

Klinikk for kirurgi, inflammasjonsmedisin og transplantasjon / Division of Surgery, Inflammatory Diseases and Transplantation

Forskningsgrupper i KIT – 2018

Gruppenavn	Gruppeleder	Avdeling
Avdeling for transplantasjonsmedisin		
Eksperimentell leverforskning	Espen Melum	ATX
Eksperimentell Transplantasjon for Kreft	Svein Dueland	ATX
Klinisk transplantasjonskirurgi og eksperimentell immunologi	Einar Martin Aandahl	ATX
Klinisk PSC forskningsgruppe (NoPSC)	Trine Folseras	ATX
Nyretransplantasjonsmedisin	Anders Hartmann	ATX
Avdeling for revmatologi, hud og infeksjonssykdommer		
Hud	Jon Anders Halvorsen	RHI
Klinisk mikrobiologi og mikrobiota medisin	Marius Trøseid	RHI
Olafiaklinikken	Anne Olaus Olsen	RHI
Rheumatologi	Øyvind Molberg	RHI
Institutt for indremedisinsk forskning		
Atherosklerose og relaterte metabolske sykdommer	Bente Halvorsen	IIF
Genomikk og metagenomikk ved inflammasjonssykdom	Johannes Hov	IIF
Inflammasjon og hjertesvikt	Arne Yndestad	IIF
Inflammasjonsmarkører for hjertekar- og metabolske sykdommer	Thor Ueland	IIF
Eksperimentell leverforskning (NoPSC)	Espen Melum	IIF
Inflammasjonssykdommers genomikk og metagenomikk (NoPSC)	Johannes Hov	IIF
Avdeling for urologi		
Infeksjon og inflammasjon i urologi	Truls E. Bjørklund Johansen	URO
Prostatakreft	Viktor Berge	URO
Avdeling for gastro- og barnekirurgi		
Barnekirurgi	Kristin Bjørnland	AGK
Kolorektal kirurgi	Arild Nesbakken	AGK
Pancreaskreft	Knut Jørgen Labori	AGK
Svulster i lever og galleveier	Sheraz Yaqub	AGK
Øsøfagus- og ventrikkelsykdommer	Egil Johnson	AGK

Department of Gastrointestinal and Children Surgery (AGK)

Grupper:

- Barnekirurgi/ Pediatric Surgery
- Kolorektal kirurgi/ Colorectal Surgery
- Pancreaskreft/ Pancreatic Cancer
- Svulster i lever og galleveier/ Hepatobiliary malignacies
- Øsafagus- og ventrikkelsykdommer/ Diseases of esophagus and stomach

Forskningsgruppe: Barnekirurgisk forskningsgruppe

Research group: Pediatric surgery – research group

Avdeling: AGK

Gruppeleder: Kristin Bjørnland

Om gruppen (kort beskrivelse på norsk):

Gruppens hovedfokus er å studere somatiske og psykososiale langtidsresultater hos pasienter som er operert for gastrointestinale og urogenitale medfødte misdannelser. Pasientrapporterte data blir vektlagt. Man studerer hvordan både operasjonstekniske og behandlingsmessige faktorer påvirker symptomer og psykososial helse. Forskningsprosjektene har fokus på tverrfaglighet, og man har et bredt forskningssamarbeid nasjonalt og internasjonalt. Translasjonsforskning inngår ved at man studerer epigenetiske faktorerens betydning ved enkelte medfødte anorektale tilstander.

About the group (short description in English):

The main focus of the group is to study somatic and psychosocial long-term outcome in patients operated for congenital gastrointestinal and urogenital conditions and how surgical techniques and follow-up protocols influence these parameters. Patient reported outcomes are considered important outcome measures. In all projects there is a strong focus on interdisciplinary collaboration, and the group collaborates both nationally and internationally. Recently, translational research has been introduced as epigenetics in congenital colorectal disorders are studied.

Hovedmedlemmer / Main members:

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Activity in 2018:

International collaboration. International collaboration has increased during 2018. The Codino study was approved and initiated. This is a European multicenter study comparing different treatment modalities for pulmonary hypertension. Two publications based on Nordic multicenter studies on esophageal atresia and biliary atresia have been accepted as well as one publication based on ERNICA collaboration on defining outcomes of congenital diaphragmatic hernia repair. Lastly, the application for Horizon 2020 for the FAMOUS study has been approved for the second stage for application for funding, and members from the group are contributors in this study. Lastly, a collaborative study between Skane university hospital and OUS was finished in 2018, dealing with transitional care for patients with congenital anorectal conditions.

National collaboration. During 2018 collaboration with the pediatric surgeons at St Olav's Hospital increased further, with special focus on congenital anorectal disorders. This collaboration is important because all patients in Norway with rare congenital disorders operated by pediatric surgeons may be included in national studies.

New members/grants. Two medical students have got funding from "Forskerlinjen" UiO and will start their full-time year January 2019. One will study outcome in Hirshsprung patients, and one will study prenatal factors in esophageal atresia. Furthermore, several master theses and "prosjektoppgaver" are associated with the various ongoing projects. We got funding from Extrastiftelsen for one PhD student to study transitional care for patients with anorectal conditions. One of the nurses at the department for pediatric surgery got funding for a PhD project studying outcome in males operated for urogenital malformations, and our urologists are heavily involved in this study.

Ongoing projects. During 2018 four PhD students have continued their projects, and there are plans for two of them to submit their thesis in 2019. The pediatric surgical department is small, and there is a high clinical work load. Even so, most of the surgeons and some of the nurses contribute to the different ongoing research projects.

Research group: Research group colorectal surgery

Department: Dept Gastrointestinal surgery and pediatric surgery

Group leader: Arild Nesbakken

About the group:

We are mainly performing translational research on colorectal cancer in a multidisciplinary team with dedicated researchers from clinical medicine and biology covering many fields - colorectal surgery, hepatobiliary surgery, oncology, radiology, pathology and molecular biology. We have excellent cooperation with The Department of Molecular oncology and the The Micrometastases Laboratory at The Institute of Cancer research, OUS – Radium hospital

The specific aims are to develop new molecular diagnostic, prognostic, predictive and monitoring biomarkers.

In order to reach our goals we have collected and are continuously collecting (high quality procedure) fresh tumour tissue, formalin fixed tissue, normal tissue and blood/serum to large biobanks, together with high quality, comprehensive clinical datasets for colorectal primary cancer, colorectal liver metastases, blood and bone marrow from population based, unselected, large series of patients.

We are aiming at establishing even stronger national and international collaboration

We are also running several clinical research projects together with geriatricians on the prevalence of complications in elderly crc patients, and the aim is to establish geriatric assessment tools to estimate the risk of - and to establish methods to prevent - such complications

We are running other smaller projects on colorectal and anal diseases and we are partners in a project on health economy related to treatment of colorectal cancer.

Hovedmedlemmer / Main members:

NAME	POSITION/TITLE/ROLE	EMPLOYER/ AFFILIATION	E-MAIL
Arild Nesbakken	Professor II / Senior consultant	OUS and UiO	arild.nesbakken@medisin.uio.no
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Live Lundar	PhD Research fellow	UiO	
Audun Mikkelsen	PhD Research fellow	UiO	
Egil Johnson	Professor II / senior consultant	OUS and UiO	
Stig P Therkeldsen	PhD Research fellow	UiO	
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Magdalena Makowska	Study nurse	OUS	
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Guro Elisabeth Lind	Ass Professor	OUS and UiO	
Anita Sveen	PhD	OUS	
Håvard Danielsen	Professor	OUS and UiO	
Tarjei S Hveem		OUS	
Aud Svindland	Professor emeritus	UiO	
Marianne G Guren	MD PhD / senior consultant	OUS	
Tormod K Guren	MD PhD / senior consultant	OUS	
Olav Dajani	MD PhD / senior consultant	OUS	
Siri Rostoft	Ass Prof / senior consultant	OUS	
Nina Ommundsen	PhD Research fellow	OUS	

Activity in 2018:

We have not arranged any meetings in the group as a whole, but many meetings in the collaborative group led by Arild Nesbakken / Ragnhild A Lothe (KG Jebsen centre) studying tumor heterogeneity, biomarkers, and now also drug sensitivity testing of living, patient derived cancer cells from liver metastases (including meetings with oncologists), successfully established during the last year

Website: www.colorectal.no

Gro Wiedswang's group / Bjørn Naume have meetings in their group

Ole H Sjo is leading the LapConor project, education program for young surgeons in laparoscopic colorectal surgery, planning research projects as part of that program

Arild Nesbakken has arranged two-day course on biomedical research for young surgeons in the department

Forskningsgruppe: Pancreaskreft

Research group: Pancreatic cancer

**Avdeling: Department of Hepato-Pancreato-Biliary Surgery,
Division of Surgery, Inflammatory Diseases and Transplantation**

Gruppeleder: Knut Jørgen Labori

Om gruppen:

Forskningsgruppen arbeider med klinisk onkologisk forskning ved pancreaskreft, både innen kirurgisk og medikamentell behandling. En betydelig del av forskningen er translasjonsforskning. Gruppens medlemmer arbeider innen flere fagfelt som kirurgi, onkologi, gastroenterologi, patologi og molekylærbiologi. Hovedmålet er å bedre diagnostikk og behandling og derav prognosen for pasienter med pancreaskreft. Translasjonsforskningen baserer seg på tumorvev og blodprøver fra pasienter som behandles ved OUS og arbeider med å kartlegge biologiske prosesser og identifisere biomarkører ved pancreaskreft. Det er utstrakt nordisk og internasjonalt samarbeid innen flere kliniske og translasjonsprosjekter. Forskningsgruppen har etablert en biobank for samling av tumorvev og blodprøver med tilhørende database og et klinisk register for pasienter som blir operert for pancreaskreft ved OUS.

About the group:

The research group is an interdisciplinary forum that perform clinical trials and translational research on pancreatic cancer and pancreatic cysts. The research group studies the importance of environmental and genetic factors in cancer development, prognostic and predictive factors, early diagnosis, and the efficacy of surgical- oncological- and symptomatic treatment. Patients with pancreatic tumors treated at Oslo University Hospital is requested consent for storage of biological material and clinical data for use in research. The research group has established a clinical data registry and a biobank with an associated database. This ensures a systematic, prospective registration of patients with pancreatic cancer who are being treated at the hospital. Clinical registry contains relevant clinical and histopathological data from routine diagnostics. Biobank database contains the results of clinical and molecular research.

Hovedmedlemmer / Main members:

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Assosierte medlemmer / Associated members:

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Marianne J. Hjermstad	Professor, RN MPH PhD	OUS, Cancer Med./ NTNU	marianne.j.hjermstad@ntnu.no
Inger Marie Bowitz Lothe	Consultant Pathologist, PhD student	OUS, Dept. of Pathology	uxilot@ous-hf.no
Mushegh Sahakyan	Surgeon, MD PhD	OUS, Intervention Centre	sahakyan.mushegh@gmail.com
Svein Dueland	Consultant medical oncologist, MD PhD	OUS, Dept. of Oncology	svedue@ous-hf.no
Olav Dajani	Consultant medical oncologist, MD PhD	OUS, Dept. of Oncology	uxolaj@ous-hf.no
Kristoffer Lassen	Consultant surgeon, MD PhD and Professor	OUS, AGK KIT and UNN, Tromsø	krlass@ous-hf.no
Bjørn Edwin	Professor, Consultant surgeon, MD PhD	OUS, Intervention Centre	bjoedw@ous-hf.no
Bård Røsok	Consultant surgeon, MD PhD	OUS, AGK KIT	brosoke@ous-hf.no
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Olaug Villanger	Consultant surgeon, MD PhD	OUS, AGK KIT	ovillang@ous-hf.no
Kim Ånonsen	Consultant Internal medicine, MD	OUS, Dept. of Gastroenterology	KIMANO@ous-hf.no
Truls Hauge	Ass. Professor, Consultant Internal medicine, MD PhD	OUS, Dept. of Gastroenterology	UXHTRU@ous-hf.no
Harald Hugenschmidt	Surgeon, PhD student	OUS, ATX KIT	harald@hugenschmidt.net
Gro Wiedswang	Consultant surgeon, MD PhD	OUS, AGK KIT	UXGRIE@ous-hf.no
Kristoffer Brudvik	Surgeon, MD PhD	OUS, AGK KIT	kwbrudvik@gmail.com
Åsmund Fretland	Consultant surgeon, MD	OUS, AGK KIT	fretland@gmail.com

Activity in 2018:

Projects:

Thematic pancreatic tumour project:

Oslo University Hospital has established a multidisciplinary research program for patients undergoing investigation for a solid or cystic pancreatic or periampullary neoplasm. Through this project the research group has established a clinical data registry and a biobank with an associated database. Patients undergoing surgical resection are asked for written informed consent to approve sampling of blood and tumour tissue for biobanking and to collect clinical data during hospital admissions or outpatient clinic visits.

Clinical trials:

NorPACT-1: Scandinavian multicentre un-blinded phase II randomized controlled trial.

Patients with resectable adenocarcinoma of the pancreatic head are randomized to receive either surgery first (control) or neoadjuvant chemotherapy (=intervention) with four cycles FOLFIRINOX followed by resection. Ongoing from March 2017. PI: Knut Jørgen Labori.

NorPACT-2: NorPACT-2 is a single arm prospective study of borderline and locally advanced pancreatic cancer, in which eligible patients undergo neoadjuvant treatment possibly followed by surgical exploration and resection. Ongoing from January 2018. PI: Knut Jørgen Labori

Bolt-on to NorPACT 1 and 2 is a translational research program based on tumour tissue and plasma (PIs: professor Elin Kure and professor Caroline Verbeke) that aims at identifying factors that are predictive of response to neoadjuvant therapy, the risk of distant cancer spread, and patient outcome.

DIPLOMA trial: Pan-European, randomized controlled, multicenter, patient-blinded non-inferiority trial comparing minimally invasive distal pancreatectomy to open distal pancreatectomy for pancreatic cancer. Patients with resectable adenocarcinoma of the pancreatic body or tail are randomized to undergo either minimally invasive or open distal pancreatectomy. Ongoing from December 2018. PI: professor Bjørn Edwin

Ongoing PhD projects:

Stina M. Stålberg, MD: "Plasma exosomes and their cargo in relation to tumor profiles in pancreatic and colorectal cancers". Supervisor: professor Elin Kure.

Inger Marie Bowitz Lothe, MD: "Molecular profiling of precursor lesions and tumours from the pancreatic head". Supervisor: professor Elin Kure.

Bart Baekelandt, MD: "Management of pancreatic and periampullary tumors – consequences for survival and patient reported outcome". Supervisor: professor Trond Buanes.

Dyre Kleive, MD: "Development of pancreatic surgery at a high-volume centre with special emphasis on pancreatic resections with vascular resection and reconstruction". Supervisor: Knut Jørgen Labori.

Ingvild Farnes, MD: "New treatment approaches for resectable, recurrent and locally advanced pancreatic cancer". Supervisor: Knut Jørgen Labori.

Harald Hugenschmidt, MD: "Tumour biology and prognostic factors in pancreatic cancer". Supervisor: Gro Wiedswang.

Kim Ånonsen, MD: "Cystic pancreatic lesions". Supervisor: Associate professor Truls Hauge.

Forskningsgruppe: Svulster i lever og galleveier

Research group: Hepatobiliary malignancies

Avdeling: Avd for gastro- og barnekirurgi, seksjon for HPB kirurgi

Gruppeleder: Sheraz Yaqub

Om gruppen:

Gruppens primære mål er å tilby pasienter med kreft i lever og galleveier den fremste behandlingen og dermed inkludere dem i både kliniske og translasjonsforsknings prosjekter.

About the group

The main aim of the research group is to conduct clinical and translational studies for the treatment of hepatobiliary malignancies.

Hovedmedlemmer / Main members:

NAME	POSITION/TITLE/ROLE	EMPLOYER/AFFILIATION	E-MAIL
Sheraz Yaqub	Group leader / Consultant Surgeon	OUS	shya@ous-hf.no
Bjørn Atle Bjørnbeth	Head of HPB Surgical unit	OUS	
Bjørn Edwin	Professor/Consultant Surgeon	OUS and UiO	
Kristoffer Lassen	Consultant Surgeon	OUS	
Bård Røsok	Consultant Surgeon	OUS	
Olaug Villanger	Consultant Surgeon	OUS	
Åsmund Fretland	Consultant Surgeon	OUS	
Kristoffer Brudvik	Resident fellow	OUS	
Umair Majid	MD, PhD-fellow	OUS and UiU	

Assosierte medlemmer / Associated members:

NAME	POSITION/TITEL/ROLE	EMPLOYER/AFFILIATION	E-MAIL
Arild Nesbakken	Professor/ Overlege	OUS og UiO	
Ragnhild Lothe	Professor	UiO	
Pål Dag Line	Professor/overlege	OUS og UiO	
Einar Martin Åndahl	Overlege	OUS	
Henrik Reims	Overlege	OUS	
Eric Dorenberg	Overlege	OUS	
Ulrik Carling	Overlege	OUS	
Trygve Syversveen	Overlege	OUS	
Knut Brabrand	Overlege	OUS	
Andreas Abildgaard	Overlege	OUS	
Knut Jørgen Labori	Overlege	OUS	
Mona E. Revheim	Overlege	OUS	
Kjetil Taskèn	Professor	UiO	
Vegard Dagenborg	Overlege	OUS	

Aktivitet i 2018

Hovedfokuset i 2018 har vært igangsetting og rekruttering til ASAC studien, som er ledet fra HPB seksjonen ved OUS og hvor alle universitetssykehus i Skandinavia som utfører leverkirurgi deltar. ASAC er en randomisert placebokontrollert studie finansiert av Kreftforeningen, Forskningsrådet og KLINBEFORSK hvor man undersøker effekten av acetylsalisylsyre (aspirin) som adjuvans etter behandling for kolorektale levermetastaser. Studien har ført til at vi har nå fått etablert et kontor med forskningssykepleiere, som er helt nødvendig for en slik studie og som også bidrar til andre forskningsprosjekter for støttepersonale for gjennomføring av prosjektene. ASAC bar i løpet av 2018 inkludert 100 av totalt 800 planlagte prosjekter (mer info på: www.asac.no).

I 2018 fikk gruppen også støtte for etablering av e-samtykkeregister (Medinsight) og fra 2019 blir alle samtykker til forskningsprosjekter ved seksjonen scannet og lagret i denne databasen.

Høsten 2018 overtok u.t. som forskningsgruppeleder og det er nå etablert regelmessige forskningsgruppemøter en gang i måneden, ev hyppigere ved behov. Videre jobbes det med å få etablert e-biobank for pasientmateriale som innsamles ved behandling/operasjon ved seksjonen. Vi har fått støtte for innkjøp av ultrafryser og jobber videre med å få midler til å etablere e-biobank.

Et annet viktig arbeidsoppgave i 2018 har vært å få etablert et prospektiv forskningsregister hvor alle data relatert til pasientbehandling blir registrert. Etter mange års jobbing med å få dette i Medinsight uten hell har vi nå landet på å få registeret etablert i eReg. I løpet av Q2 2019 vil vi ha registrert all data fra 2012 og videre som kan flyttes inn i eReg. Planen videre er at alle leger ved seksjonen som opererer pasienter med sykdom i lever eller galleveier skal registrere i dette registeret. Det er allerede planlagt flere studier basert på registerdata.

Det arbeides i gruppen med protokoller for flere kliniske studier og det forventes at vi i 2019 kommer i gang med prehabiliteringsstudie hvor pasienter som testes til å være "skrøpelige" for stor kreftkirurgi vil få et treningsopplegg slik at de tolererer operasjonen bedre.

Det arbeides også med forskningsprosjekt relatert til pasienter med cholangiocarcinom og enda tettere samarbeid med det veletablerte norske PSC senteret for å få mest mulig synergi og translasjonsforskning for denne pasientgruppen med dårlig prognose.

Forskningsgruppen trenger fortsatt flere stipendiater og personer med akademiske stillinger, men gruppen er nå i en fin fase med mange engasjerte og entusiastiske medlemmer med gode forskningsprosjekter som vil lede til en spennende periode de neste 3-5 år.

Forskningsgruppe: Øsofagus- og ventrikkelsykdommer

Research group: Diseases of esophagus and stomach

Avdeling: Gastro- og barnekirurgisk avd., OUS, Ullevål

Gruppeleder: Egil Johnson

Om gruppen:

Hensikten med gruppen er:

1. Å evaluere (kvalitetssikre) eksisterende kirurgisk behandling av sykdommer i øsofagus og ventrikkel, så vel som brokk med siktemål å definere forbedringsområder (f. eks. robot-assistert kirurgi).
2. Å delta i forskningstudier innen fagfeltet, både klinisk og molekylært for å forbedre behandlingen (f. eks biomarkører).

About the group:

Purpose of the group is:

1. To evaluate by quality assurance existing surgical treatment of diseases of esophagus and stomach, as well as hernia, in order to improve treatment (e.g. robotic assisted surgery).
2. To participate in research studies within this field, both clinically and by molecularly in order to improve treatment (e.g. biomarkører)

Main members:

NAME	POSITION/TITLE/ROLE	EMPLOYER/ AFFILIATION	E-MAIL
Egil Johnson	Professor II / Senior consultant/leader	OUS and UiO	Egil.johnson@ous-hf.no
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Tom Mala	Senior consultant	OUS	tommalm@ous-hf.no
Dag T. Førland	Senior consultant	OUS	uxdarl@ous-hf.no
Geir Olav Hjortland	Senior consultant	OUS	goo@ous-hf.no
Al-Haidari Ghazwan	Senior consultant	OUS	ghazal@ous-hf.no
Peter W. Hauge	Senior consultant	OUS	uxhaup@ous-hf.no
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Mariusz Goscinski	Senior consultant	OUS	margos@ous-hf.no
Suo Zhenhe	Senior consultant	OUS	zhs@ous-hf.no
Guro E. Lind	Professor	OUS	guro.elisabeth.lind@rr-research.no
Truls Hauge	Associate professor/Senior consultant	OUS	uxhtru@ous-hf-no

Activity in 2018:

NeoRes II, Scandinavian multicenter randomized study. The aim is to compare effect of waiting after chemoradiotherapy (CROSS regimen) prior to resection for 4–6 versus 10–12 weeks relative to degree of pathological response, morbidity and survival. Inclusion of patients finished by April 2019.

Continual monitoring of complications and survival (quality assurance) following resection for esophageal- and gastric cancer.

Continuous biobanking of blood samples and tumor tissue ((esophageal cancer (n=330), gastric cancer (n=230)) to a biobank since 2013 for research purposes. Analyses of biobank material has started for analysis of biomarkers.

Two EURECCA projects finished in 2018 with two publications. Project 1: Comparison of outcome (treatment strategy, mortality, survival) in patients aged 65 or more with resectable esophageal and gastric cancer between European countries (Norway, Sweden, Belgium, Netherlands, Switzerland). Project 2: Comparison of treatment strategy and outcome in patients with metastatic gastric cancer (st IV=M1) with regard to proportion of resections, chemotherapy, no therapy and survival has been finished.

The INNOVATION EORTC study: European randomised multicenter study, in which patients with HER-2 positive gastric cancer were randomized in three arms for i) chemotherapy, ii) chemotherapy with trastuzumab or iii) chemotherapy with trastuzumab+pertuzumab. End point is overall survival. Inclusion is still ongoing.

Keynote 061 (randomised study with palliative chemotherapy in 2. line for gastric cancer; standard chemotherapy vs. MK3475. MSD study. Inclusion from August 2015. Keynote 180 (phase II study, palliative chemotherapy in 3. line for esophageal cancer; MK3474). MSD study. Inclusion from January 2016.

Keynote 181 (randomised phase III study, palliative chemotherapy in 2. line for esophageal cancer; standard chemotherapy vs MK3475). MSD study. Inclusion from January 2016.

Nordic NEC registry (registry study for all patients with neuroendocrine carcinoma of the GI-tract (GEP-NEC)). Inclusion from 2013. NNTG (Nordic Neuroendocrine Tumor Group). See reference 3 in the publication list (GO Hjortland is co-author).

ET-NEC. Nordic one armed phase II study for patients with GEP-NEC, Ki67 index 20–55%, first line treatment with everolimus and temozolomid. Inclusion from October 2014. NNTG study.

Vitamin- and nutritional status, gastrointestinal complaints and QoL after resection or gastrectomy for gastric cancer. “Gastrointestinal symptoms and quality of life in relation to malnutrition after gastrectomy for gastric cancer *A cross-sectional study* Master’s thesis by Åslaug Asgeirsdatter Ullerud 2018

A study is planned aiming at evaluation of security and side-effects by combining immunotherapy with a PD-1 inhibitor and radiation therapy in patients with esophageal cancer (INEC studien).

One long-term objective for the group is to explore molecular changes in esophageal- and gastric cancer and seek for potential tumor and blood derived biomarkers that can facilitate early discovery of premalignant and malignant changes in these patients. Accordingly, early detection of such changes would improve the treatment result because of identification of an early stage of the cancer. In addition, biomarkers could be used to monitor effect of neoadjuvant and adjuvant treatment and a recurrence could be potentially discovered in a treatable stage of the cancer.

Anastomotic leakage after esophageal resection for cancer –microcirculatory changes in the gastric tube and thoracic esophagogastric anastomosis. Purpose: to study microcirculatory changes in the gastric tube before, under and after surgery for esophageal cancer. Study examinations: clinical examination, CT-angiography of mesenterial vessels, laser doppler flowmetry, light spectrophotometry and endoscopic duplex ultrasound. LDF, LS and EDU also performed by gastroscopy. 15 patients has been recruited. Main investigators: Nathkai Safi and Simen Tveten Berge under the supervision of Syed SH Kazmi, PhD/senior consultant of the Dept. of Vascular Surgery of the Oslo University Hospital. Cooperative investigators: Jonny Hisdal, PhD/physiology Dept. of Vascular Surgery, Asle W. Medhus, PhD/Head of Dept. of Gastroenterology and Hans-Olaf Johannessen, PhD/Senior Consultant Dept. of Gastrointestinal Surgery. Application to REC was sent primo February-18. '

A potential Phd project has started studying survival and quality of life following esophageal resection for cancer by endoscopic resection and surgical resection by hybrid or total mini invasive technique.

Funding 2018

Local money from UiO

Some funding from medical companies regarding oncological studies

Meetings: One, local in the research group. Two, in the SEGC (Scandinavian esophageal and gastric cancer group) in Oslo and Stockholm, respectively. A symposium in Esophageal surgery at Norsk Kirurgisk Forenings Høstmøte October 23, 2018, Høgskolen Lovisenberg, Oslo.

Department of Rheumatology, Dermatology and Infectious Diseases (RHI)

- Hud/ Dermatology Research Group
- Klinisk mikrobiologi og mikrobiotamedisin/ CliMic: Clinical microbiology and microbiota medicine
- Olafiaklinikken
- Revmatologi

Forskningsgruppe: Hud

Research group: Dermatology Research Group

Avdeling: RHI

Gruppeleder: Jon Anders Halvorsen

Om gruppen:

Vår forskning fokuserer på hudkreft, hudinflammasjon, hudens mikrosirkulasjon og livskvalitet/epidemiologi.

About the group:

Our research is mainly focusing on the following four topics: skin cancer, skin inflammation, skin microcirculation and quality of life/epidemiology.

Hovedmedlemmer / Main members:

NAME	POSITION/TITLE/ROLE	EMPLOYER/AFFILIATION	E-MAIL
NN NN	Group leader / Professor	OUS og UiO	
Daniel de la Rosa-Carrillo	Associate professor/Section leader/senior consultant	OUS and UiO	daniel.carillo@medisin.uio.no
Jon Anders Halvorsen	Associate professor/senior consultant	OUS and UiO	j.a.halvorsen@medisin.uio.no
Petter Gjersvik	Professor	UiO	petter.gjersvik@medisin.uio.no
Tone Kristin Bergersen	Associate professor/senior consultant	OUS and UiO	Kristin.bergersen@medisin.uio.no
Jan-Øivind Holm	Associate professor	UiO	j.o.holm@medisin.uio.no
Eva Rehbinder	PhD candidate	UiO	e.m.rehbinder@medisin.uio.no
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Assosierte medlemmer / Associated members:

NAME	POSITION/TITEL/ROLE	EMPLOYER/AFFILIATION	E-MAIL
NN	NN	NN	NN
Øyvind Molberg	Professor I / Senior consultant	OUS og UiO	
Pål Aukrust	Professor/ Senior consultant	OUS and UiO	
Karin Lødrup Carlsen	Professor	UiO	
Per Medøe Thorsby	Researcher	OUS	
Guttom Haraldsen	Professor	UiO	

Activity in 2018:

A total of 26 publications came out of our research group in 2018, compared to 16 publications in 2017 and 7 publications in 2016. Please visit: <https://www.ous-research.no/home/dermatology/Publications/8250>

In addition, there was a significant popular scientific contribution

- Dissertation Panagiota Mantaka, Follicutropic mycosis fungoids, 2018
- Phd-project Mohammad Rizvi, Skin cancer in organ transplant recipients. Expecting dissertation in 2019 (Main supervisor Gjersvik).
- PhD-project Kuan Yang, Metabolic regulation of the NLRP3 inflammasome, Expecting dissertation in 2019 (Main supervisor Sandanger)
- Phd- project Eva Rehbinder, Skin and amniotic fluid microbiome and atopic dermatitis, expecting dissertation in 2019 (Main supervisor Landrø)
- Phd- project Astrid Lossius, Early gene expression changes as predictors of therapeutic response to narrow-band UVB in atopic dermatitis, in progress (Main supervisors Holm)
- Phd- project Olav Gramstad, hereditary angioedema, in progress (Main supervisor Landrø)
- Phd-project Helene Mohn, Prescription drugs in atopic eczema (co-supervisor Halvorsen)

Ongoing projects

- Moderate to Severe Atopic Dermatitis: Evaluation of Upadacitinib in Combination with Topical Corticosteroids in Adolescent and Adult Subjects” (Abbvie) (Berents, Rehbinder, m.f.)
- Dermareg – register on skin diseases and biobank for skin diseases (Bergersen)
- A NORwegian multicentre trial assessing the effectiveness of tailoring infliximab treatment by therapeutic DRUG Monitoring (NOR-DRUM) (Sandanger)
- Janssen. An Observational Post-authorization Safety Study of Ustekinumab in the Treatment of Pediatric Patients Aged 12 Years and Older with Moderate to Severe Plaque Psoriasis (Sitek)
- European prurigo project (Halvorsen)
- Finger pulp blood flow in systemic sclerosis patients with digital ulcers treated with sympathetic blockade (Bergersen).
- Systemic lupus collaboration with Dep of Rheumatology (Bø, Hortemo)
- Whole exome sequencing for diagnosis of inherited ichthyoses (Sitek)
- Clinical Transcriptomics in Systemic Vasculitis (CUTIS) with Dept. of Rheumatology (Løchen, Bø)
- Treatment of genital lichen planus in women (Helgesen)
- Metastasis from cutaneous squamous cell carcinoma in organ transplant recipients and background population in Norway 1968–2016 (Gjersvik, Roscher)

For detailed information, please visit our webpage: <https://www.ous-research.no/dermatology/>

Forskningsgruppe: Klinisk mikrobiologi og mikrobiotamedisin

Research group: CliMic: Clinical microbiology and microbiota medicine

Avdeling: Reumatologi, hudsykdommer og infeksjonssykdommer (RHI)

Gruppeleder: Marius Trøseid

About the group:

Marius Trøseid is leading a research group on Clinical Microbiology and Microbiota Medicine (CliMic) at Department of Rheumatology, Dermatology and Infectious diseases at Oslo University Hospital, Rikshospitalet. In this environment, we have developed a sequencing-based microbiota profiling pipeline including bioinformatics methods and applied it in multiple conditions, including HIV and cardiovascular disease. We have also established a regional research network (ReMicS: Regional research network for clinical Microbiota Science) and are hosting a yearly national microbiota conference (www.microbiota.no). Our scientific focus is the role of the gut microbiota in chronic infectious, inflammatory and metabolic diseases, including cardiovascular disease. The aim is to better understand the contribution of the gut microbiome in order to lay the foundation for clinical microbiota medicine, i.e. medical practice based on stratification or modulation of gut microbial composition or function. We have recently received funding through the Era-Net for managing a WP on multi-level integrated bioinformatics in the SCRATCH consortium (Microbiota-based SCReening of Anal Cancer in HIV-infected individuals), aiming to improve diagnostic screening of HIV-associated anal cancer, taking microbiota profiling one step closer to clinical practice. We have also received NRC funding for the project "Targeting the gut heart axis", which is about to start later this year.

Hovedmedlemmer / Main members:

NAME	POSITION/TITLE/ROLE	EMPLOYER/AFFILIATION	E-MAIL
Marius Trøseid	Group leader/Associate professor	OUS and UiO	marius.troseid@medisin.uio.no
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Christiane Mayerhofer	PhD research fellow	OUS and Nasjonalforeningen for Folkehelsen	cristiane.mayerhofer@rr-research.no
Hedda Hoel	PhD research fellow	UiO and Lovisenberg Hospital	h.b.hoel@studmed.uio.no

Assosierte medlemmer / Associated members:

NAME	POSITION/TITEL/ROLE	EMPLOYER/AFFILIATION	E-MAIL
NN	NN	NN	NN
Dag Henrik Reikvam	senior consultant and researcher	OUS	dagrei@ous-hf.no
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Birgitte Stiksrud	PhD research fellow	OUS and UiO	birgitte.stiksrud@medisin.uio.no

Activity in 2018:

ONGOING PROJECTS

- GutHeart (Targeting the gut microbiota to treat heart failure)
PhD project for Cristiane Mayerhofer. The first adequately powered RCT targeting the gut microbiome aiming to improve cardiac function in heart failure patients, comprising n=150 patients. Patient inclusion is finished as of April 2019.
- COMicS (Copenhagen-Oslo Co-morbidity and Microbiota Study in HIV infection).
PhD project for Beate Vestad. Planned as the largest prospective microbiome study in HIV-infected individuals. Microbiota analyses were finalized during 2018. Bioinformatics, biostatistics and manuscript preparation is planned during 2019.
- Targeting the NLRP3 inflammasome in HIV infection
PhD project for Hedda Hoel. The aim is to explore whether inflammasome activation is enhanced during HIV infection, and if so, if inflammasome activation could explain increased cardiovascular risk in HIV-infected individuals. First two papers accepted.

SELECTED PUBLICATIONS

1. Kummen M, Mayerhofer C, Vestad B, Broch K, Awoyemi A, Storm-Larsen C, Ueland T, Yndestad A, Hov J, Trøseid M. Gut microbiota signature in heart failure defined from profiling of two independent cohorts. *J Am Coll Cardiol* 2018; 17: 1184-6.
2. Hoel H, Hove-Skovsgaard M, Hov, JR, Gaardbo, JC, Holm K, Kummen M, Rudi K, Nwosu F, Valeur J, Gelpi M, Seljeflot I, Ueland PM, Gerstoft J, Ullum H, Aukrust P, Nielsen SD, Trøseid M. Impact of HIV and Type 2 diabetes on Gut Microbiota Diversity, Tryptophan Catabolism and Endothelial Dysfunction. *Sci Rep* 2018; 8:6725.
3. Arnbjerg CJ, Vestad B, Hov JR, Pedersen KK, Jespersen S, Johannesen HH, Holm K, Halvorsen B, Fallentin E, Hansen AE, Lange T, Kjær A, Trøseid M, Fischer BM, Nielsen SD. Effect of *Lactobacillus rhamnosus* GG Supplementation on Intestinal Inflammation Assessed by PET/MRI Scans and Gut Microbiota Composition in HIV-Infected Individuals. *JAIDS* 2018; 78: 450-7.
4. Mayerhofer CCK, Awoyemi AO, Moscovitch SD, Lappegård KT, Hov JR, Aukrust P, Hovland A, Lorenzo A, Halvorsen S, Seljeflot I, Gullestad L, Trøseid M, Broch K. Design of the GutHeart-targeting gut microbiota to treat heart failure-trial: a Phase II, randomized clinical trial. *ESC Heart Fail* 2018; 5: 977-84..
5. Storm-larsen C, Stiksrud B, Eriksen C, Nowak P, Holm K, Thalme A, Dyrhol-Riise AM, Brix S, Hov JR, Trøseid M. Microbial translocation revisited: targeting the endotoxic potential of gut microbes in HIV-infected individuals. *AIDS* 2019; 33: 645-53.

Forskningsgruppe: Olafiaklinikken

Research group: Olafiaklinikken

Avdeling: Rheumatology: Dermatology and Infectious diseases

Gruppeleder: Jon Anders Halvorsen (vikar 2018)

Om gruppen

Olafiaklinikken er den største klinikken for seksuelt overførbare infeksjoner i Norden, med en unik tilgang på mange pasienter med stor variasjon i symptomer, funn og infeksjoner. Vi er også nasjonalt kompetansesenter for seksuelt overførbare sykdommer, og vårt forskningsfokus er studier som tar utgangspunkt i klinisk aktivitet med mål om å bedre kunnskapsbasert medisinsk behandling.

About the group

Olafiaklinikken is the largest clinic for sexually transmitted infections in the Nordic region with a unique access to a large patient population with a variety of background characteristics, symptoms, clinical findings and infections. We also hold the function as the National Advisory Unit on Sexually Transmitted Infections, and therefore our research focus is on clinical studies providing results to support evidence based medicine and guidance for treatment practice.

Hovedmedlemmer / Main members:

NAME	POSITION/TITLE/ROLE	EMPLOYER/AFFILIATION	E-MAIL
Harald Moi	Prof em	OUS/UiO/NKS01	harald.moi@medisin.uio.no
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Assosierte medlemmer / Associated members:

NAME	POSITION/TITEL/ROLE	EMPLOYER/AFFILIATION	E-MAIL
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Linn M B Corwin	LIS	OUS	libren@ous-hf.no
Kirsti Jacobsen	MSci	OUS	

Activity in 2018:

Publications:

Haugstvedt Å, Amundsen E, Berg RC Chemsex among men - a questionnaire study. Tidsskr Nor Lægeforen 2018 09 04;138(13). Epub 2018 sep 3

Randjelovic I, Moghaddam A, Freiesleben de Blasio B, Moi H The Role of Polymorphonuclear Leukocyte Counts from Urethra, Cervix, and Vaginal Wet Mount in Diagnosis of Nongonococcal Lower Genital Tract Infection. Infect Dis Obstet Gynecol 2018;2018():8236575. Epub 2018 jul 26

Unemo M, Salado-Rasmussen K, Hansen M, Olsen AO, Falk M, Golparian D, Aasterød M, Ringlander J, Nilsson CS, Sundqvist M, Schønning K, Moi H, Westh H, Jensen JS Clinical and analytical evaluation of the new Aptima Mycoplasma genitalium assay, with data on M. genitalium prevalence and antimicrobial resistance in M. genitalium in Denmark, Norway and Sweden in 2016. Clin Microbiol Infect 2018 May;24(5):533-539. Epub 2017 sep 18

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Olsen AO Human papillomavirus and immunosuppressive drugs in dermatology - a 'neoplastic' combination? J Eur Acad Dermatol Venereol 2018 Feb;32(2):192.

Projects

«Humant papillomavirus (HPV) i munnhule og urin». Irene K. Christiansen, Akershus universitetssykehus HF Prosjektperiode: 2018 - 2020

Turning the Tide of Antibacterial resistance (TTA) Fredrik Muller, Oslo universitetssykehus HF Prosjektperiode: 2016 - 2023

Evaluation of implementation of pre-exposure prophylaxis (PrEP) in subjects at particular risk of infection with HIV. Anne Olaug Olsen, Oslo universitetssykehus HF (i dag står vel Frank som hovedansvarlig) Prosjektperiode: 2017 - 2022

'Gonorrhoea - an 'urgent and major threat to public health' Jørgen Vildersshøj Bjørnholt, Universitetet i Oslo Prosjektperiode: 2018 - 2022

"Clinical and analytical evaluation of the new Aptima Mycoplasma genitalium assay, with data on M. genitalium prevalence and antimicrobial resistance in M. genitalium in Denmark, Norway and Sweden in 2016". This project was finished in 2018 and may serve as a basis for further collaboration with clinics in other Nordic countries.

"Chemsex among men - a questionnaire study"; the project was finished in 2018 (and first article published in 2018).

Forskningsgruppe: Revmatologi

Research group: Rheumatology

Avdeling: Revmatologi, hug og infeksjon (RHI)

Gruppeleder: Øyvind Molberg

Om gruppen (kort beskrivelse på norsk):

Forskningsgruppen driver klinisk forskning og translasjonsforskning på systemiske, inflammatoriske multi-organ sykdommer hos barn og voksne. Dette er en gruppe heterogene sykdommer karakterisert ved svingende, uforutsigbare sykdomsforløp, høy sykdomsbyrde og redusert forventet livslengde. Ut i fra en overordnet målsetning om å bidra til bedre og mer presis behandling av disse sykdommene fokuserer vi på tre hovedsatsningsområder; (i) (i) prospektive, høy-oppløselighetsstudier av forløp og organkomplikasjoner i komplette, populasjons-baserte pasientkohorter. (ii) Identifikasjon av prognostiske og prediktive biomarkører og (iii) utvikling av forskerdrivne kliniske intervensjonsstudier. For øyeblikket har vi særlig fokus på studier av systemisk sklerose og juvenil idiopatisk artritt (barneleddgikt), men vi har også pågående, mindre prosjekter på flere andre systemsykdommer.

About the group (short description in English):

The research group is conducting clinical and translational research on juvenile- and adult-onset systemic, multi-organ inflammatory rheumatic syndromes; a heterogeneous group of chronic, relapsing-remitting disorders characterized by high disease burden and reduced survival. With a long-term aim of better and more precise therapeutic targeting of these disorders, we have three major focus areas; (i) prospective studies of complete, population based patient cohorts at high resolution, and in multiple dimensions, (ii) identification of prognostic and predictive biomarkers, and (iii) development of investigator initiated clinical trials. Current priorities include, but are not limited to, nationwide studies on systemic sclerosis and juvenile idiopathic arthritis.

Hovedmedlemmer / Main members:

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Aktivitet i 2018 / Activity in 2018:

Important Scientific milestones in 2018

- Completed the first, ever pilot, randomized clinical trial (RCT) on standardized fecal microbiota transplantation in Systemic Sclerosis. Received funding from KLINBEFORSK for a full-scale, nationwide early phase RCT on standardized fecal microbiota transplantation in Systemic Sclerosis.
- Completed large-scale dataset on the impact of serial Eccocardiography in Systemic Sclerosis. Identified diastolic dysfunction as independent, major risk factor for mortality. Study, with first and last author from our group, published in Journal of American College of Cardiology, one of the top three ranked cardiology journals worldwide.
- Completed international collaborative study on chemokine CCL21 as novel biomarker predicting pulmonary arterial hypertension in Systemic Sclerosis. Study, with first and last author from our group, published in Arthritis and Rheumatology, one of the top three ranked rheumatology journals worldwide.
- Completed long-term observational studies on nationwide patient cohorts with juvenile and adult-onset mixed connective tissue disease; providing novel data on disease evolution and outcome in this rare disease. These studies formed the core part of two PhD theses completed in 2018.
- Completed large-sale, controlled study on physical fitness in children with juvenile idiopathic arthritis. First studies published in 2108.
- Completed controlled, follow-up study on cardiopulmonary afflictions in juvenile dermatomyositis. First studies published in 2018.
- Publication of primary results from international collaborative myositis studies, for which contributed DNA samples and comprehensive clinical data sets.

Publications

Members of the group co-authored 26 full-length papers in international, peer-reviewed journal in 2018. On 11 of these papers, the first and/or last author was from the Rheumatology group

Doctoral degrees in 2018:

- Silje Reiseter, Mixed Connective Tissue Disease. Results from a Nationwide Norwegian Cohort.
- Siri Hetlevik, Long term outcome and clinical manifestasions in juvenile mixed connective tissue disease

Department of Transplantation (ATX)

- Eksperimentell leverforskning/The Experimental Liver Research Group
- Eksperimentell transplantasjon for kreft/ Experimental Transplantation and Malignancy
- Klinisk transplantasjonskirurgi og eksperimentell immunologi/ Clinical transplantation surgery and experimental immunology
- Norsk senter for PSC (NoPSC)/ Norwegian PSC Research Center (NoPSC)
- Nyretransplantasjonsmedisin/ Kidney Transplantation
- Klinisk effektforskning
- Livskvalitet og helseøkonomi

Forskningsgruppe: Eksperimentell leverforskning

Research group: Experimental hepatology

Avdeling: NoPSC / IIF

Gruppeleder: Espen Melum

Om gruppen:

Hovedmålet med forskningen i gruppen er å forstå mekanismer som regulerer betennelse i gallegangene med fokus på immunologi. I tillegg driver vi basal forskning relatert til funksjonen til natural killer T-celler og mucosal associated invariant T (MAIT)-celler. Disse cellene er spesielt interessant for leversykdom siden de er tilstede i et stort antall i leveren.

About the group:

The main aim of our research is to understand mechanisms regulating cholangitis with a clear focus on immunology. In addition to the cholangitis focused studies, we are also doing basic research related to the function natural killer T-cells and mucosal associated invariant T (MAIT)-cells. NKT and MAIT cells are especially interesting in the context of liver diseases since they are abundantly present in the liver.

Hovedmedlemmer / Main members:

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Assosierte medlemmer / Associated members:

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Activity in 2018:

The experimental liver research group is focusing on experimental and translational studies related to primary sclerosing cholangitis (PSC). The most important tools in our research are mouse models that model aspects of cholangitis development. The group represents one of the three research groups at the Norwegian PSC research center. All of our laboratory activities take place at the Research Institute for Internal Medicine. In 2018, the group consisted of the group leader, one post.doc., four PhD students, and a lab manager. The main aim of our research is to understand mechanisms regulating cholangitis with a clear focus on immunology but also now incorporating aspects of regenerative medicine. In addition to the cholangitis focused studies, we are also doing basic research related to the function of natural killer T-cells, mucosal associated invariant T (MAIT)-cells and other immune subsets. NKT and MAIT cells represent unconventional T-cells that are especially interesting in the context of liver diseases since they are abundantly present in the liver. The ultimate goal of our research is to understand the pathology of and uncover potential novel treatment targets for PSC.

The mouse models we use are immune driven which is in concordance with the leading theories on PSC pathogenesis. In 2018, we demonstrated for the first time that NKT cells can drive experimental cholangitis that can be treated by monoclonal antibodies. These results corroborate our earlier results on the role of cholangiocytes as antigen-presenting cells. As part of a collaboration with our guest professor Frank Tacke from Aachen, Anna Frank worked in the group as a visiting PhD student during 2018. As part of her project, she established protocols for generating biliary organoids from both murine livers, human livers and brush samples acquired during ERCP. These techniques are now being used in studies aiming to understand PSC cholangiocyte biology as well as the role of the cholangiocyte in immunology.

Forskningsgruppe: Eksperimentell transplantasjon for kreft

Research group: Transplantation and Malignancy

Avdeling: Avdeling for transplantasjonsmedisin

Gruppeleder: Svein Dueland

Om gruppen:

Gruppen arbeider med levertransplantasjon hos pasienter med malign sykdom og spredning utelukkende til lever. Aktuelle pasienter har så omfattende sykdom i lever at vanlig leverkirurgi ikke er aktuelt. Behandlingsalternativet hos pasienter som er aktuelle for inklusjon i de ulike levertransplantasjonsstudiene er palliativ kjemoterapi. Median forventet overlevelse på kjemoterapi hos inkluderte pasienter har vært omtrent 1 år ved tidspunkt for levertransplantasjon. Forskningsgruppen består av transplantasjonskirurger, onkologer, radiologer, nukleærmedisinere, thoraxkirurg og gastrokirurg (leverkirurg). Gruppen har etablert samarbeid med helseøkonomer.

About the group:

The research group is exploring liver transplantation as a treatment option for patient with different malignant diagnoses, primarily patients with colorectal cancer. Patients that may be included in the different liver transplantation protocols have non-resectable liver only disease. The treatment option today for these patients is palliative chemotherapy with median expected overall survival of about one year at time of inclusion in the liver transplantation studies. Members of the research group are transplant surgeons, oncologists, radiologists, nuclear medicine specialists, liver surgeon and thorax surgeon. Research projects also include health economic expertise.

Collaboration:

Internal (other groups, departments, clinicians, etc.):

- Trygve Syversveen , Department of Radiology, OUS

National:

- Gudrun Bjørnelv , The Institute of Health and Society, UiO
- Eline Aas , The Institute of Health and Society, UiO

International:

- Professor Julia Johansen, Herlev University Hospital, Denmark
- Professor Eric Vibert; Hopital Paul Brousse Paris
- Professor Umberto Cillo, University of Padova

Hovedmedlemmer / Main members:

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Assosierte medlemmer / Associated members:

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Activity in 2018:

We started in 2006 a pilot study (SECA-I) on liver transplantation (LT) in patients with colorectal cancer (CRC) with liver only metastases that had liver metastases that could not be resected. CRC patients where palliative chemotherapy is the only treatment option have median overall survival (OS) of about 2 years from time of starting first line chemotherapy. In the SECA-I study final 5-year OS was 44% and several patients are alive more than 10 years after LT. All 23 patients included in the SECA-I study had a relapse of the malignant disease after LT, however they survived for long period of time after the relapse. A patient has survived for more than 12 years after time of relapse.

The reason for the long OS from time of relapse is that the majority of relapses were small pulmonary metastases that increase at a slow rate. We have published that in contrast to the general opinion, immunosuppressive treatment administered in our study did not result in increased growth rate of pulmonary metastatic lesions. Many of the patients developing pulmonary metastases after the LT received surgical resection of the pulmonary metastases. OS after LT was related to clinical factors as: size of largest liver lesion, plasma tumor marker CEA levels, response to chemotherapy at time of LT and time from resection of the primary colorectal cancer and LT. We have also published results showing that PET is important for detecting extra hepatic disease not detected by CT. Patients with extra hepatic disease were excluded from LT and these patients had short OS with median OS of 16 months. Furthermore, we have also shown that PET activity in liver metastases could predict OS after LT. We have shown that a selected group of CRC receiving LT has 5-year OS after LT similar to other patients groups (patients with hepatocellular carcinoma) that today receive LT as standard of care.

By stricter selection criteria (SECA-II study), excluding patients with progressive disease at time of LT and at least one year from time of diagnosis, we have now reported estimated 5-years OS after LT of 83%. In contrast to SECA-I study where all 23 included patients had a relapse after LT, some patients in the SECA-II study have been observed for more than 5 years without a relapse. Also in the SECA-II study the most frequent site of relapse was pulmonary lesions that increased at a slow rate and many of the patients received surgical resection of the pulmonary metastases.

Patients included in the SECA-I study reported a decrease in quality of life and physical function 3 months after LT. Although after 6 months the values for quality of life and physical function had returned to baseline values and remained good for up to end of study at 3 years after LT.

Due to the scarcity of donor liver internationally it is important to expand the liver donor pool available for LT in CRC patients. We have published a report showing that CRC patients may receive only a small part of a donor liver (segment 2+3) and have their liver removed in a two-stage operation. By this technique two patients may have a LT based on a single donor liver. A patient receiving such an operation is alive without disease 5-years after the LT. We have also used donor livers that are not routinely used in LT, in general these organs work well may represent an underutilized source of donor organs that may be used for LT in CRC patients.

Our results from the SECA-I and II studies suggest that highly selected CRC patients should also be considered for LT internationally and not being automatically rejected for consideration for LT based on the primary malignant diagnosis. There is increasing international interest in our results on LT in CRC patients. During the last years we have been invited as speakers at international meetings in North and South America, Europe and Asia.

Forskningsgruppe: Klinisk transplantasjonskirurgi og eksperimentell immunologi

Research group: Clinical transplantation surgery and experimental immunology

Avdeling: Avdeling for transplantasjonsmedisin

Gruppeleder: Einar Martin Aandahl, lege dr. med.

Om gruppen:

Forskningsgruppen fokuserer på mekanismer som regulerer immunaktivitetet både hos friske mennesker og hos pasienter med immunrelaterte sykdommer eller tilstander. Dette kan være sykdommer som rammer immunapparatet direkte eller avstøtningsreaksjoner etter organtransplantasjon, kroniske infeksjoner eller cancer. Forskningsgruppen arbeider også med kliniske problemstillinger relatert til nyre, lever og pancreas transplantasjon. Vi har prosjekter rettet mot kirurgiske teknikker, komplikasjoner, graft- og pasienteroverlevelse og preservasjon av donororganer.

About the group:

The research group is focused on mechanisms that regulate the immune activity in healthy individuals and in patients suffering from immune related diseases and conditions such as rejection after organ transplantation, autoimmunity, immunodeficiency, chronic infections and cancer. The research group is also working on clinical issues related to kidney, liver and pancreas transplantation. Surgical technique, surgical complications, patient- and graft survival, graft function and preservation and donor criteria are important areas of the research projects.

Hovedmedlemmer / Main members:

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Activity in 2018:

In 2018, we have continued our research projects within the fields of intracellular signal transduction events in subsets of T cells in healthy individuals and patients transplanted with kidneys, pancreas and liver. Two postdocs have been working on these projects they have been pursued in close collaboration with Section for organ transplantation at Rikshospitalet and collaborators in other departments. Two clinical PhD-students have also completed their PhD-projects. One project was focused on liver transplantation using donors older than 75 years, ABO-incompatible liver transplantation and liver transplantation after iatrogenic liver injuries. The other PhD-projects was focused on the benefits and pitfalls using a new surgical technique in pancreas transplantation. We have also continued our international collaborations where on study investigating the effects of donor-specific antibodies in liver transplantation is of particular interest. This study is an initiative by the transplant center in Copenhagen and is run through the ScandiTransplant partnership. The research group has also been expanded the last year and we have initiated new projects related to postoperative complications after organ transplantation.

Forskningsgruppe: Klinisk forskningsgruppe for primær skleroserende kolangitt

Avdeling: Avdeling for transplantasjonsmedisin

Research group: Clinical PSC Research Group

Gruppeleder: Trine Folseraas

Om gruppen:

Primær skleroserende cholangitt (PSC) er en viktig sykdom ved Seksjon for gastromedisin, Avdeling for transplantasjonsmedisin, OUS, Rikshospitalet. Pasienter med PSC henvises fra hele landet for utredning og behandling. Gallegangskreft (cholangiocarcinom) er en viktig komplikasjon til PSC, men det er en utfordring å diagnostisere denne kreftformen tidlig nok til at kurativ behandling kan gjennomføres. PSC er en av de vanligste indikasjonene for levertransplantasjon i Norge, og denne behandlingen foregår ved OUS, Rikshospitalet. Vår forskning fokuserer på å forbedre utredning, oppfølging og behandling av PSC pasienter.

About the group:

Primary sclerosing cholangitis (PSC) constitutes an important part of the patients seen at Department of Gastroenterology, Oslo University Hospital, Rikshospitalet. The Clinical PSC Research Group focus their effort on improving diagnosis, treatment and follow-up of PSC patients. We collaborate closely with the Clinical Liver Research Group at Haraldsplass Deaconess Hospital in Bergen, led by Mette Vesterhus, the Epigenetics Group at the Department of Cancer Prevention, Institute for Cancer Research at the Norwegian Radium Hospital, led by Guro E. Lind and the International PSC Study Group (IPSCSG).

Main research objectives comprise:

- 1) Identification of genomic- and molecular alterations in PSC-associated cholangiocarcinoma that could be used to early diagnosis of malignancy and provide improved, personalized treatment to these patients.
- 2) Identification of biomarkers of PSC disease progression.
- 3) The establishment of a regional research and reference network in autoimmune liver diseases including prospective, annual follow-up of PSC patients according to a standardized protocol and collection of biological material for biobank storage.

Hovedmedlemmer / Main members:

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Activity in 2018:

Development of methods for early detection- and personalized treatment of PSC-associated biliary tract cancer

In collaboration with the Epigenetics group at the Department of Cancer Prevention, Institute for Cancer Research at the Norwegian Radium Hospital, led by professor Guro E. Lind, we have previously identified a promising diagnostic modality for cholangiocarcinoma (CCA) consisting of a panel of four DNA methylation biomarkers tested in biliary brush material (Andresen K et al, Hepatology 2015). In continued collaboration with the Lind's group, these methylation biomarkers have been analyzed in bile samples collected from more than 200 patients, including PSC patients with and without CCA. Findings suggest that analyzing aberrant DNA methylation utilizing bile may improve and complement current detection methods for CCA (manuscript in submission). Validation of these findings utilizing an independent panel of bile samples from PSC patients from Sweden and Finland is ongoing (manuscript in preparation).

The mutational profile of different subtypes of biliary tract cancer (BTC) have been established, but to what extent genetic changes found in non-PSC BTC and other cancers are also present in PSC-BTC, is unknown. In collaboration with IPSCSG and the Department of Pathology at the University Hospital of Heidelberg, we have established a large international collective of 186 tissue samples from PSC-patients with CCA. By performing histomorphological characterization and tumor DNA sequencing of 42 known cancer-related genetic loci to detect mutations utilizing this tissue collective, we have detected a large number of genomic alterations, many of which representing putative actionable therapeutic targets (manuscript in submission). The large number of potentially druggable mutations provides strong incentives for early phase clinical trials of molecular target drugs and personalized cancer treatment in PSC-associated BTC. Future projects further utilizing this valuable tissue collection are underway.

Regional research and reference network in autoimmune liver diseases (AILD)

In 2015 we invited colleagues at other hospitals in our region (Helse Sør-Øst) to participate in a regional network for autoimmune liver diseases (AILD) with the aim to follow patients prospectively at regular intervals and in a standardized protocol including clinical data, biochemical parameters and radiological imaging in addition to serum biobanking. Throughout 2018, we have been working on the development of an eCRF for data collection using a web-based platform provided by VieDoc, with the goal of launching the eCRF for use in the first quarter of 2019. Associate professor Mette Vesterhus, University of Bergen and Haraldsplass Deaconess Hospital, has coordinated the work together with other members of the Clinical PSC Research Group.

The International PSC Study Group (IPSCSG) Database

The collaboration within the IPSCSG has made it possible to define disease characteristics and factors influencing the disease course across a large number of PSC patients. By the end of 2018 clinical data from 8467 PSC patients from 43 institutions across 22 countries and 5 continents have been collected, including more than 400 Norwegian PSC patients.

**Forskningsgruppe: Transplantasjonsmedisinsk
forskningsgruppe**

Research Group: Research Group for Transplantation Medicine

Avdeling: Avdeling for Transplantasjonsmedisin

Gruppeleder: Professor, overlege Trond Jenssen

Om gruppen:

Gruppen utfører epidemiologiske og kliniske studier med endepunktsdata på pasienter som gjennomgår nyretransplantasjon, pankreastransplantasjon og øycelletransplantasjon. Data som publiseres er dels registerbasert (via et komplett nasjonalt endepunksregister som oppdateres årlig (Norsk nyreregister) samt en lokal biobank), dels randomiserte kliniske studier som initieres av gruppen selv, og deltakelse i internasjonale multisenter-studier. Studiene fokuserer spesielt på immunterapi, farmakokinetikk, farmakokinetisk modellering og metabolisme, med fokus på post-transplantasjons diabetes (PTDM).

About the group:

The research group carries out epidemiological and clinical outcome studies in kidney transplantation, pancreas transplantation and islet transplantation. Data from the Norwegian Renal Registry (which is updated yearly) together with data from a local biobank are generated, together with RCTs and observational studies. The studies focus on immunotherapy, pharmacokinetics, pharmacotherapeutic modelling and metabolism, in particular metabolism in post-transplant diabetes (PTDM).

Hovedmedlemmer / Main members:

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Hege Pihlstrøm	Consultant	OUS	
Dag Olav Dahle	Consultant	OUS	
Thea Anine Strøm Halden	Postdoc	OUS	
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Kjersti Lønning	PhD candidate	OUS	
Anders Haugen	PhD candidate	OUS	
Nina Elisabeth Langberg	PhD candidate	OUS	
Veronica Krogstad	Postdoc	OUS	
Marit Elizabeth von Düring	PhD candidate	OUS	

Assosierte medlemmer / Associated members:

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Hanne Scholz	Senior reseracher, PhD, Chief islet lab	UiO	
Svein Kolset	Professor	UiO	
Trine Reine	Postdoc	OUS	
Ida Robertsen	Ass. Prof, PhD	UiO	

Ida Robertsen, Fanny Bruserud, Erik Heyerdahl Strøm er ikke lengre ass. medlemmer
Activity in 2018:

One of our candidates defended her thesis in 2018 (Kjersti Lønning). We were appointed a new PhD candidate for 2019–2021 by Helse Sørøst (Rasmus Kirkeskov Carlsen, Aarhus University Hospital). Rasmus will join our group Sep 1, 2019).

Ongoing projects were continued in 2018:

- Post-transplant diabetes
- Fatty acid and transplantation outcomes
- Kidney rejection and immunity
- Osteoporosis after transplantation
- Visceral fat and inflammation
- Individualization of immunosuppression
- Biomarkers of outcomes after transplantation
- Adherence of immunosuppressive treatment
- Pregnancy and transplantation
- Estimated glomerular filtration rate

In relation to these topics altogether 49 peer-reviewed papers were published in international journals in 2018.

Our biobank was expanded, and we have established valid measures for long-term outcome after transplantation (e.g., GFR, pharmacological and metabolic measures, inflammation parameters, etc.). An investigator-initiated RCT on use of empagliflozin in PTDM patients was finalized in 2018, to be published early in 2019.

We have joined an international network for refinement of GFR measurements with iv iohexol. Three central publications from our group, published with transplantation related topics in 2018, are cited below:

1. Krogstad V, Vethe NT, Robertsen I, Hasvold G, Ose A-MD, Hermann M, Andersen AM, Chan J, Skauby M, Svensson MHS, Åsberg A, Christensen H. Determination of tacrolimus concentration and protein expression of P-glycoprotein in single human renal core biopsies. *The Drug Monit* 2018 40(3): 292–300.
2. Nordheim E, Horneland R, Aandahl EM, Grzyb K, Aabakken L, Paulsen V, Midtvedt K, Hartmann A, Jenssen T. Pancreas transplant rejection episodes are not revealed by biopsies of the donor duodenum in a prospective study with paired biopsies. *Am J Transplant*. 2018; 18(5): 1256–1261.
3. Heldal TF, Ueland T, Jenssen T, Hartmann A, Reisæter AV, Aukrust P, Michelsen A, Åsberg A. Inflammatory and related biomarkers are associated with post-transplant diabetes mellitus in kidney transplantation. *Tranpl Int* 2018; 31(5): 510–519.

Forskningsgruppe:

Navn på forskningsgruppe: Klinisk Effektforskning

Avdeling: Klinisk Forskningsseksjon, Avdeling for transplantasjonsmedisin, KIT

Research group:

Group name: Clinical Effectiveness Research

Department: Klinisk Forskningsseksjon, Avdeling for transplantasjonsmedisin, KIT

Gruppeleder: Mette Kalager

Om gruppen (kort beskrivelse på norsk):

Forskergruppen gjennomfører store randomiserte og epidemiologiske studier for å vurdere effekter av ulike diagnostiske og terapeutiske intervensjoner.

Gruppen står for flere randomiserte studier relatert til kolorektal kreft screening og gastrointestinal endoskopi. De gjennomfører også epidemiologiske studier på tarmsykdommer, mammografi og studier på kvalitetsforbedring av klinisk praksis.

About the group (short description in English):

The research group is approaching different topics in clinical effectiveness of diagnostic and therapeutic interventions. The group is responsible for several randomized trials related to colorectal cancer screening and gastrointestinal endoscopy. They are also conducting epidemiologic studies on intestinal disease, mammography and studies concerning quality improvement of clinical practice.

Hovedmedlemmer / Main members:

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Collaboration

Internal (other groups, departments, clinicians, etc.):

- Gastromedisinsk avdeling, Ullevål sykehus
- Miljø for Helseøkonomisk evaluering, HELED, UiO
- Seksjon for sykkelig overvekt, Aker sykehus
- The IBSEN (Inflammatory Bowel South-Eastern Norway) Study group

National

- Senter for sykkelig overvekt, Sykehuset i Vestfold
- MAKing Grade the Irresistible Choice (MAGIC)
- Akershus Universitetssykehus
- Sykehuset Østfold
- Sørlandet sykehus
- Sykehuset Telemark
- Stavanger Universitetssykehus
- St Olavs hospital
- Universitetssykehuset Nord-Norge
- Bærum sykehus Vestre Viken

International:

- Harvard T.H Chan School of Public Health, Boston
- Karolinska Institutet, Stockholm
- Erasmus Medical Centre, Rotterdam
- Marie Curie Skłodowska, Warsawa
- Sloan Kettering Memorial, New York City
- McMaster university, Hamilton, Canada

Aktivitet i 2018 / Activity in 2018:

(Maks 1 side / Max 1 page)

Activity:

In 2018, the Group published 48 articles in peer-reviewed journals. Of all articles, 56% were published in level 2 journals (the top 20% of journals in each field). The mean impact factor for the articles published by the Group in 2018 is 17.3. The cumulative impact factor is 709.

Funding:

Magnus Løberg received a career grant of 7 602 000 NOK from the Southern and Eastern Norway Regional Health Authority.

The group received 3 603 000 NOK in funding from the Southern and Eastern Norway Regional Health Authority and 5 000 000 NOK from the Norwegian Cancer Society for ISCAN, a research project investigating post-colonoscopy and post-screening colorectal cancer.

The Swedish Cancer Society (2 grants) and the Research Council (1 grant) in Sweden allocated altogether 7.2 million SEK for the I-SCAN project.

The group received 19 890 000 NOK in funding for COLONIZE, a clinical trial of fecal transplant in C Diff infection from KLINBEFORSK's allocation through the National Hospital Trust. The study was also awarded 15 000 000 NOK from the Norwegian Research Council, but this was returned due to overlapping grant allocation.

Awards:

- Michal F. Kaminski received the Bronze Cross of Merit for scientific achievements by the President of the Republic of Poland.
- Frederik Emil Juul received a Certificate of Recognition for his presentation Fecal Microbiota Transplantation Versus Antibiotics for Primary Clostridium Difficile Infection at the Digestive Disease Week in Washington D.C.
- Louise Emilsson received the 1st Distinguished Research Making Family Medicine Shine Award (DRA) at WONCA 2018 for the best article in general medicine.
- Øyvind Holme received the Kjell Arne Grøttum research prize of Sørlandet Hospital.
- Henriette Cecilie Jodal received study and travel grants from the Caroline Musæus Aarsvold's fund and funding from Unifor. The foundation provides support to study abroad for students and young medical researchers at the Faculty of Medicine at the University of Oslo.
- Lise Mørkved Helsingør was awarded the Fulbright Scholarship.

Contributions in mass media and other publications:

- Dagens Medisin. Leder i Kreftregisteret hardt ut mot BMJ-studie. 2018 Jan 5. Norwegian
- Die Zeit, Germany. Schluss mit dem Mammografie-Screening. 2018 Jan 11. German
- Dagens Medisin. Mammografimarkering får kritikk. 2018 Mar 9. Norwegian
- Nordland Pluss. Grethe (49) fra Bodø er kvinne nummer en million. Samtidig raser debatten. 2018 Mar 9. Norwegian
- Avisa Nordland. Grethe ble kvinne nummer 1.000.000 – Mammografiprogrammet feiret en milepæl. 2018 Mar 10. Norwegian
- Aftenposten. En 5 minutters undersøkelse reduserer risikoen for å dø av tarmkreft. 2018 Apr 25. Norwegian
- Forskning.no. Anbefaler tarmkreftscreening for amerikanere fra 45 år. 2018 Jul 7. Norwegian.
- Dagens Medisin. USA anbefaler å screene 45-åringene for tarmkreft. 2018 Jul 11. Norwegian.
- Barua I, Holme Ø et al. Indremedisinen. Screening mot tarmkreft i hele Norge. 2018 Jul 12. Norwegian.
- Dagens Medisin. Mener «retningslinje-lojalitet» bremser forskning. 2018 Sep 9. Norwegian.
- Dagens Medisin. Det er ille når klinikere ikke vil delta i forskning fordi de ikke vil fravike retningslinjene. 2018 Sep 24. Norwegian
- Fysioterapeuten. – Vegrer seg for forskning på grunn av retningslinjer. 2018 Sep 27. Norwegian
- Kalager M., Kristiansen Sønbo I. Når kreft er ufarlig. 2018. Dagbladet. 2018 Nov 29. Norwegian

- Tidsskrift for Den norske legeforening. Screening for tarmkreft har effekt, men bare for menn. 2018 Oct 1. Norwegian
- Tidsskrift for Den norske legeforening. Legemiddelindustrien er ofte tungt involvert i studier. 2018 Nov 30. Norwegian
- Barua I. Kunstig intelligens kan i verste fall gjøre oss mindre intelligente. Morgenbladet. 2018 Dec 17. Norwegian.

Research group: Research group for Quality of Life and Health Economy

Localization: Department of Transplantation Medicine, OUS.

Group leader: Marit Helen Andersen

About the group (short description in English): The group aims to be a research network and communicate methodological issues within PROM - and health economic research in a clinical context to map the impact of disease and compare perceived efficacy and treatment. In total 32 researchers are joining the multi-disciplinary research group. We organize regular meetings for group members and one annual PROM- research conference each year (about 100 participants).

Hovedmedlemmer / Main members (14):

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Activity in 2018 (selected):

- 2 PROM-research conferences:
 - 1) 28. January organized by Research group for Quality of Life and Health Economy + PROMINET (82 participants)
 - 2) 10 October organized by KIT and OsloMet (50 participants)
- Regular meetings for group members prepared with agenda
- 25 publications in peer reviewed international journals (main group members)
- Oral - and poster presentations at international conferences (ISOQOL, transplant conferences etc)
- Active collaboration with network partners (PROMINET, LIVSFORSK, OsloMet, UiO): planning and performing research projects, funding, courses/teaching, recruiting master and PhD-candidates, supervision of candidates, external scientific committee work etc.)
- Application to Helse Sør Øst, result: 1 PhD position for 6 yrs. Other applications: NFR, Life science at UiO, Extrastiftelsen, all in collaboration with Dep of Health and Society, UiO.
- 2 doctoral dissertations (1 main group member, 1 associated group member).
- The research group strengthened by 2 professor positions

Ongoing research projects (selected):

- Developing and testing a health literacy intervention for renal recipients
- Health literacy in the context of renal recipients
- Evidence bases implementation of a structured, tailored education program for renal recipients
- Improved selection of elderly over 65 years for kidney transplantation (ended November 2018)
- Effects on length of stay and costs with same-day retransfer to the referring hospitals for patients with acute coronary syndrome after angiography and/or percutaneous coronary intervention
- Cost analysis study: Open versus laparoscopic liver resection for colorectal liver metastases (the Oslo-CoMet study).

Department of Urology (URO)

- Infeksjon og inflammasjon i urologi/ Infections and inflammation in urology
- Prostatakraft/ Prostate Cancer

Forskningsgruppe: Prostata kreft

Research group: Prostate cancer

Avdeling:Urologisk avdeling

Gruppeleder: Viktor Berge

Om gruppen:

Forskningsgruppen i prostata kreft består av urologer og onkologer (hovedmedlemmer) og leger og basalforskere fra andre avdelinger og institutter (assosierte medlemmer), engasjert i prostata kreft forskning ved Oslo Universitets sykehus. Hovedområdet i klinisk forskning er utkomme studier og livskvalitets studier etter primær behandling og salvage behandling av prostata kreft. Et annet viktig område er studier av nye diagnostiske metoder og fokal behandling av prostata kreft.

Hovedområdet i translasjonsforskning som gruppen er involvert i, er deteksjon og validering av nye potensielle biomarkører i tumorvev, blod og urin. Siktemålet med denne aktiviteten er reduksjon av overdiagnostikk og overbehandling, forbedring av diagnostikk og bedre behandling av høy risiko kreft.

About the group:

The Research group of prostate cancer consists of urologists and oncologists (main members) and physicians and scientists from other departments and institutes (associated members), engaged in prostate cancer research at Oslo University Hospital (OUH). Main topic of clinical research is outcomes studies and Quality of Life studies after primary treatment and salvage treatment of prostate cancer. Another important topic is studies of new diagnostic methods and focal treatment of prostate cancer.

The main aims for our translational research are detection and validation of new putative biomarkers in tumor tissue, blood and urine. This effort focuses on achieving a more personalized treatment of patients, in order to reduce overdiagnosis and overtreatment of prostate cancer, but also to improve diagnosis and treatment of high-risk prostate cancer.

Hovedmedlemmer / Main members:

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Aktivitet i 2018

Antallet kliniske studier i vår forskningsgruppe er økende. De følgende aktiviteter i 2018 vil bli spesielt nevnt:

- Vår sPLND (salvage pelvic lymph node dissection) studie fortsatte med rekruttering av pasienter i fjor, et økende antall pasienter tilbys denne type metastase kirurgi.
- En annen klinisk studie som fikk stor oppmerksomhet i fjor var «Martini studien» som sammenligner urinlekkasje og seksual funksjon mellom norske pasienter operert for prostata kreft enten ved Martini klinikken i Hamburg eller ved Oslo Universitets Sykehus. Dette var en arbeidskrevende studie som ikke ville vært mulig å gjennomføre uten stor innsats fra Sophie Fosså. Resultatene fra denne studien satte på agendaen en kirurgisk teknikk der man gjør intraoperativ frysesnitt av prostata (NeuroSAFE) for å forbedre nervesparing uten økt risiko for positive kirurgiske marginer.
- Wolfgang Lilleby var medforfatter i 2 publikasjoner om EBRT-BT (strålebehandling + brachterapi) som viste lovende resultater i behandling av aggressiv prostata kreft.
- Vårt samarbeide med Kreftregisteret fortsatte i 2018 og resulterte blant annet i artikkel nummer 2 fra vår PhD student Kirsti Aas.
- Den pågående FARP studien som er en randomisert studie som sammenligner radikal prostatektomi med fokal HIFU behandling, rekrutterte mange pasienter i fjor.
- Lars Magne Eri la ned stor innsats i fjor i det omfattende arbeidet med å overføre vår prostata kreft biobank og register til Medinsight plattformen som nå er klar til bruk.

Når det gjelder aktivitet innenfor translasjonsforskning i 2018, vil følgende trekkes fram:

- I samarbeid med University College Dublin, har vi startet validering av 9 serum biomarkører i en radikal prostatektomi (RP) kohort for å predikere Gleason grad og sykdomsstadium pre-RP. I fjor publiserte vi også resultater om en annen biomarkør kalt Serum Respons Factor (SRF), der vi viste at SRF bestemmelse vha immunhistokjemi etter radikal prostatektomi kan være en nyttig guide for klinikeren til bedre å identifisere pasienter for riktig follow-up og salvage behandling på riktig tidspunkt.
- Et annet givende samarbeide gjennom flere år er med Queen University/Almac i Belfast. Basert på materiale fra vår biobank og prostata kreft register, har vi fortsatt arbeide med validering av en prostata kreft biomarkør utviklet i Belfast. Som en spinoff effekt har vår forsknings gruppe mottatt transkriptom data fra Belfast, og dette har vært til stor nytte i vår egen forskning, f.eks har i fjor en PhD student assosiert med vår gruppe brukt disse data i sin egen forskning.
- Gjennom flere år har vår forskningsgruppe deltatt i et Movember sponset internasjonalt konsortium i utviklingen av unike TMA (Tissue micro array). Disse TMA'ene er lagret ved Johns Hopkins University i USA. I fjor var vi aktive i dette konsortium med å gjøre disse TMA'ene tilgjengelige på Proscia som er en data plattform som gir tilgang til dette digitale patologi materialet over internett. TMA'ene er basert på vev både fra primærtumor og metastaser. Forutsetning for tilgang er at styret for dette biorepositoriet har godkjent søknad om tilgang til materialet. På denne måten kan forskergrupper over hele verden få testet lovende biomarkører.

- Vår forskergruppe har gjennom 2018 fortsatt sitt fruktbare samarbeid med Alicia Llorente og hennes gruppe i validering urin exosomer som potensielle biomarkører for prostatakreft.
- Hovedmedlemmer i vår gruppe har i 2018 vært forfatter eller medforfatter i 15 publikasjoner om prostata kreft.

Activity in 2018:

The number of clinical studies is increasing in our research group. The following activities will be specially mentioned:

- Our sPLND (salvage pelvic lymph node dissection) study continued to recruit patients last year; there is an increasing number of patients being actual for this type of metastatic surgery.
- Another clinical study, which attracted great attention during 2018, was the “Martini study” that compares urinary continence and sexual function between Norwegian patients operated for prostate cancer at the Martini clinic in Hamburg or at Oslo University Hospital, a strenuous study not being possible without hard work from Sophie Fosså. The results of this study put on the agenda a surgical technique with intraoperative frozen section (NeuroSAFE) of the prostate specimen in order to improve nervesparing without increased risk of positive surgical margins.
- Wolfgang Lilleby coauthored two publications about EBRT-BT (radiation therapy + brachytherapy) which reported promising results in treatment of aggressive prostate cancer compared to conventional radiation treatment and radical surgery.
- Our collaboration with the Norwegian cancer registry continued during 2018 and resulted in paper number 2 for our PhD student Kirsti Aas.
- The ongoing FARP study, which is a randomized study comparing radical prostatectomy and focal HIFU treatment for localized prostate cancer, recruited many patients during 2018.
- Lars Magne Eri made a tremendous job during last year for transferring our prostate cancer biobank and registry into the Medinsight platform. This new platform is now ready for use.

Concerning translational research, special emphasis will be given to the following activities within our group during 2018:

- In collaboration with the University College Dublin, we have started validation of 9 serum biomarkers in a radical prostatectomy (RP) cohort in order to predict grade and stage pre-RP. Last year we also published results about another biomarker called serum response factor (SRF), where we showed that SRF assessment by immunohistochemistry following radical prostatectomy could be useful in guiding clinicians to better identify patients for appropriate follow-up and timely treatment.
- Another rewarding collaboration during several years has been with Queen University/Almac in Belfast. Based on material from our biobank and prostate cancer registry, we continued validation of prostate cancer biomarkers developed in Belfast. As a spinoff effect, our research group has received a huge amount of transcriptome data from Belfast, which is of great benefit for our own research, e.g. a PhD student associated with our group is utilizing these data in his own research.

- During many years, our research group has participated in a Movember sponsored international consortium about developing unique TMA (Tissue micro array) from primary tumor and metastatic tissue in aggressive prostate cancer. These TMA's are now stored in a repository located at Johns Hopkins University, US. Last year our group were active in this consortium to make these TMA's available on Proscia, a platform that gives instant, global access to this digital pathology content. A prerequisite is approval of applications by the board of the consortium. In this way many research group all over the world can test promising biomarkers.
- Our research group continued in 2018 the fruitful collaboration with Alicia Llorente and her group in validating urine exosomes as potential biomarkers in prostate cancer.
- Main members of our group have authored or coauthored 15 publications about prostate cancer during 2018

Research Institute for Internal Medicine (IMF)

- Atherosklerose og relaterte metabolske sykdommer
- Genomikk og metagenomikk ved inflammasjonssykdom
- Inflammasjon og hjertesvikt
- Inflammasjonsmarkører for hjertekar- og metabolske sykdommer

Forskningsgruppe: Inflammasjonssykdommers genomikk og metagenomikk

Research group: Genomics and metagenomics in inflammatory diseases

Avdeling: Institutt for indremedisinsk forskning / Research institute of internal medicine (and Norwegian PSC Research Center)

Gruppeleder: Johannes R. Hov, j.e.r.hov@medisin.uio.no

Om gruppen:

Forskningsgruppen studerer i hvilken grad tarmfloraen påvirker kroniske betennelsessykdommer. Vi studerer tarmfloraen særlig ved hjelp av genetiske metoder (sekvensering), og benytter tverrsnittsstudier, oppfølgingsstudier og behandlingsforsøk. Hovedmålet er å lete etter sykdomsårsaker, men med et særlig fokus på å etablere klinisk tarmfloramedisin som et eget felt med vekt på biomarkører og behandling.

About the group:

The research group is studying the influence of the gut microbiome on inflammatory diseases. We use genetic and metabolomic methods, and cross-sectional, longitudinal and interventional designs. The main aims are to identify causes of diseases and to establish microbiota medicine as a clinical field with an emphasis on biomarkers and therapy.

Hovedmedlemmer / Main members:

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Activity in 2018:

Many projects of our group and the closely integrated Trøseid group are currently ongoing and have been in a working phase in 2018. Our first metagenome project in PSC is steadily progressing in a collaboration with Andre Franke's group in Kiel, aiming for submission in 2019. In heart failure, the first large cross-sectional microbiota profiling study was published and follow-up work suggests that the observed dysbiosis in part is related to dietary factors. The ongoing GutHeart interventional trial nearly completed submission. The lab work of the largest study of the gut microbiota in HIV was finished in 2018, aiming for 2019 submission.

The group is increasingly interested in aetiology of post-transplantation challenges in PSC, including recurrent PSC, which is the focus of several recently funded projects. This includes the number one milestone in 2018, the ERC Starting Grant awarded to group leader Hov to the project StopAutoimmunity. The grant totals 1.5 million euros over 5 years and will cover the PI 50% in addition to two three-year postdocs. In addition, two PhD students funded by the South-Eastern Norway Regional Healthy Authority will support the project with clinical and basic projects.

Finally, in the 2018 research funding call from the South-Eastern Norway Regional Healthy Authority, we received, together with the Trøseid group and more than 20 other groups in the health region funding for "ReMicS: Regional research network for clinical microbiota Science" funded. The amount is 1.5 million NOK annually over 3 years and will cover an administrator/lab support person for the network, in addition to network activities. The aim is to establish a multi-disciplinary network of scientific and clinical excellence in order to lay the foundation for clinical microbiota medicine, i.e. therapy stratified by or targeting the microbiome.

Forskningsgruppe: Immunologiske og molekylære mekanismer i myokard remodelering og hjertesvikt

Research group: Immunological and molecular mechanisms in myocardial remodeling and heart failure

Avdeling: Institutt for indremedisinsk forskning

Gruppeleder: Trine Ranheim/Pål Aukrust

Om gruppen:

Ved å studere hvordan bestemte komponenter i den inflammatoriske responsen påvirker progresjonen av kardiovaskulære sykdommer (CVD), og også hvordan inflammasjon initieres, vedlikeholdes og avsluttes, har vår gruppe det ambisiøse målet å utvikle nye strategier for å forebygge, identifisere og behandle ulike former for CVD og relaterte metabolske forstyrrelser.

Vår gruppe har en translasjonell forskningsprofil. Vi bruker eksperimentelle musemodeller for å etterligne CVD-utviklingen og karakteriserer de patogene prosessene som er involvert. I tillegg inkluderer vår forskningsstrategi *in vitro*-studier i primære isolerte celler fra mennesker og mus, samt kliniske studier i velkarakteriserte pasienter med CVD, undersøkelse av prøver fra perifert blod, samt vevsprøver. Det endelige målet er å utvikle nye behandlingsmodaliteter i CVD og relaterte sykdommer.

About the group:

By studying how specific components of the inflammatory response affects cardiovascular disease (CVD) progression and also how inflammation is initiated, maintained and terminated, our group has the ambitious aim to develop novel strategies for preventing, identifying and treating different forms of CVD and related metabolic disorders.

Our group has a translational research profile. We use experimental mouse models to mimic CVD development and characterize the pathogenic processes involved. In addition, our research approach includes *in vitro* studies in primary isolated cells from man and mouse, as well as clinical studies in well characterized patients with CVD, examining samples from peripheral blood, as well as tissue samples. The ultimate goal is to develop new treatment modalities in CVD and related disorders.

Collaboration:

National:

- Prof. Magnar Bjørås, Avd. kreftforskning og molekylærmedisin, NTNU
- Prof. Ivar Sjaastad, Institutt for eksperimentell medisinsk forskning, OUS Ullevål
- Prof. Kåre-Olav Stensløkken, Institutt for Medisinske basalfag, UiO

International:

- Prof. Erik A. Biessen, University of Maastricht, The Netherlands

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Activity in 2018:

Cardiovascular disease (CVD) is the leading cause of death globally. Most forms of CVD are associated with inflammation. Atherosclerosis and chronic heart failure are conditions characterized by a chronic non-resolving inflammatory phenotype, while myocardial infarction and stroke, the direct consequences of atherosclerosis, are acute inflammatory conditions. Our main hypothesis is that these inflammatory processes, chronic or acute, directly contribute to the pathogenesis of CVD. During the recent years our group has gradually shift the focus from heart failure to atherosclerosis and obesity and related metabolic disturbances.

PROJECTS

Innate immune responses in cardiac injury, atherosclerosis and related metabolic disorders.

We study three arms of the innate immune system: (1) The NLRP3 inflammasome, a platform for the post-translational activation of IL-1 β . In addition to studies on the pathogenic consequences of activation of the NLRP3 inflammasome in CVD, we have projects where we investigate how the inflammasome is activated. (2) The role of the complement system in clinical and experimental atherosclerosis. (3) Effective resolution of inflammation is important to prevent progression of acute inflammation to non-resolving chronic inflammation. Inflammation resolution is a coordinated and active process, and we are currently examining how this is regulated in different forms of CVD.

DNA damage and repair in atherosclerosis and heart failure.

Aging, reactive oxygen species and chronic stress cause damage to both nuclear DNA (nDNA) and mitochondrial DNA (mtDNA) and this is proposed to contribute to development of non-communicable diseases as CVD. We believe that DNA damage and the associated DNA repair mechanisms are centrally involved in the pathogenesis of both atherosclerosis and heart failure by promoting non-resolving inflammation. We are currently examining this hypothesis experimentally, using mouse models that are deficient in DNA repair enzymes or have increased DNA repair activity.

FUNDING

Our work in 2018 was based on funding from Helse Sør-Øst RHF, Research Council of Norway, UNIFOR-FRIMED, Anders Jahres fond til vitenskapens fremme. In addition we are partners in an EU supported project *ERA-NET in CVD*.